

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant: Guy Zanella
Application No.: 10/581,521
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Confirmation No.: 8451
Group Art Unit: 1791
Examiner: Jacob T. Minskey
Title: Method For Producing A Moulded Part

Commissioner for Patents
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PRE-APPEAL BRIEF REQUEST FOR REVIEW

Sirs:

This is a Pre-Appeal Brief Request For Review of the final rejection made in the Office Action mailed on December 24, 2008, and is submitted concurrently with a Notice of Appeal. Upon carefully considering the following comments and the arguments of record (all of which are incorporated herein by reference in their entireties), it is believed that the panel will agree that the Office has acted arbitrarily in making the extant rejection without the requisite substantive evidence.

In rejecting claims 1-3 and 6-8 as being anticipated by U.S. Patent No. 5,186,999 to Brambach ("Brambach"), Applicants respectfully submit that the Office has incorrectly interpreted the cited reference and has therefore failed to establish a proper case of anticipation.

In particular, Applicant respectfully submits that there is no teaching (or suggestion) within Brambach of molding at least one composite sandwich material as claimed in claim 1. Brambach teaches the formation of a sheet-like sandwich material formed of a core material sandwiched between two reinforced top layers. (*See e.g.*, column 1, lines 58-61). A local reinforcement may be injected under pressure through one of the top layers into the core layer. (*See, e.g.*, column 2, lines 14-21). Brambach teaches various methods of injecting the reinforcement into the core (*see, e.g.*, column 4, lines 38-64), but does not teach (or suggest) any method for molding the sandwich material to form a molded composite part as required in claim 1.

In the outstanding Office Action, it is asserted that Brambach teaches “an injection molding process in which the core is directly injected in an injection molding machine in a mold described as a back support to control the positioning of the material in order to bond the core to all the layers”. (See page 2, paragraph 4 of the Office Action dated December 24, 2008). Assuming, *arguendo*, that this disclosure is considered to be a molding process as asserted by the Office, it does not describe molding the sandwich material into a molded composite article. Rather, this disclosure clearly describes injecting the plastic reinforcement material into the core. (See column 4, line 63 and column 5, lines 2-3 as cited by the Office in the outstanding Office Action).¹ Indeed, Brambach is silent with respect to any teaching or suggestion of molding a sandwich material into a molded composite part as required by claim 1.

Regarding the Office’s assertion that the back support is a mold, Applicant respectfully disagrees. The back support described by Brambach is merely to prevent the plastic material from being forced through the sandwich structure when high pressures are used to insert the plastic reinforcing material into the core. (See column 5, lines 10-14). The support provides no molding function whatsoever. As is specifically taught by Brambach, the plastic support that is injected into the core material hardens after injection to provide for a local reinforcement to enable auxiliary means to be secured. (See, e.g., column 1, lines 46-49 and column 2, lines 14-27).

It is further asserted in the outstanding Office Action that Brambach teaches a process for forming a sheet-like material (column 1, line 12) that is obtained by molding at least one composite sandwich (column 1, lines 58-63). (See paragraph 5 of the Office Action dated December 24, 2008). It is respectfully submitted that at column 1, line 12, Brambach teaches that one example of a sheet-like material is a sandwich structure. Further, the teaching at column 1, lines 58-63 simply states one object of the invention, namely, to provide a sheet-like material provided with a local reinforcement. There is simply no teaching or suggestion in these cited passages, or anywhere within Brambach, of molding a sandwich material to form a molded composite part. As is clearly taught by Brambach, the invention relates to a sheet-like sandwich material with a local reinforcement and to a method of providing a local reinforcement in a sheet-like material, such as a sandwich structure. (See column 1, lines 5-11 of Brambach). Nowhere in Brambach is there any suggestion of a molded composite part made by molding a sandwich structure.

Additionally, Applicant respectfully submits that Brambach does not teach or suggest an expansion agent that reacts during molding as claimed in claim 1. It is asserted that the claimed expansion agent is disclosed at column 3, lines 36-39 of Brambach. (See paragraph 5 of the Office Action dated December 24, 2008). Applicant respectfully disagrees. This passage cited by the Office teaches the in situ formation (generation) of a foamed core material within the sandwich structure. The “expandable material” recited in line 38 of column 3 of Brambach is merely the material that

¹ See paragraph 4 of the Office Action dated December 24, 2008.

expands to form the foamed core. It is not an expandable material located in the sandwich structure that reacts in a mold. For instance, in the presently claimed invention, expandable material in the sandwich structure reacts during molding. (*See, e.g.*, page 8, lines 28-33 of the specification). The asserted “expandable material” in Brambach is expended prior to any possible molding of the sandwich material as the “expandable material” is needed to form the foam core of the sandwich structure. Accordingly, the “expandable material” of Brambach is not, and cannot be, the same as the expandable material recited in claim 1.

In separately rejecting claims 9 and 12 under 35 U.S.C. §103(a) as being obvious over U.S. Patent No. 5,186,999 to Brambach (“Brambach”) in view of U.S. Patent No. 6,692,681 to Lunde (“Lunde”), Applicant respectfully submits that the Office has incorrectly interpreted the cited references and has therefore failed to establish proper *prima facie* cases of obviousness.

As discussed in detail above, Applicant submits that Brambach does not teach or suggest molding at least one composite sandwich where the sandwich has incorporated therein an expansion agent that reacts during the molding step as claimed in claim 1.

As discussed previously, the Office asserts that Brambach teaches “an injection molding process in which the core is directly injected in an injection molding machine in a mold described as a back support to control the positioning of the material in order to bond the core to all the layers”. (*See* page 2, paragraph 4 of the Office Action dated December 24, 2008). Assuming, *arguendo*, that this disclosure is considered to be a molding process as asserted by the Office, it still does not describe molding the sandwich material into a molded composite article. It is respectfully submitted that Brambach merely teaches injecting the plastic reinforcement material into the core.

Regarding the assertion that the back support is a mold, Applicant respectfully disagrees. The back support described by Brambach is merely to prevent the plastic material from being forced through the sheet when high pressures are used to insert the plastic reinforcing material. (*See* column 5, lines 10-14). The support provides no molding function whatsoever. As is clearly taught by Brambach, the plastic support that is injected into the core material hardens after injection to provide for a local reinforcement to enable auxiliary means to be secured. (*See, e.g.*, column 1, lines 46-49 and column 2, lines 14-27).

It is further asserted in the outstanding Office Action that Brambach teaches a process for forming a sheet-like material (column 1, line 12) that is obtained by molding at least one composite sandwich (column 1, lines 58-53). (*See* paragraph 5 of the Office Action dated December 24, 2008).

It is respectfully submitted that at column 1, line 12, Brambach teaches that one example of a sheet-like material is a sandwich structure. Further, the teaching at column 1, lines 58-63 of Brambach simply states one object of the invention, namely, to provide a sheet-like material provided with a local reinforcement. There is simply no teaching or suggestion in this cited passage, or anywhere within Brambach, of molding a sandwich material to form a molded composite part. As is clearly

taught by Brambach, the invention relates to a sheet-like sandwich material with a local reinforcement and to a method of providing a local reinforcement in a sheet-like material, such as a sandwich structure. (See column 1, lines 5-11 of Brambach). Nowhere in Brambach is there any teaching or suggestion of a molded composite part made by molding a sandwich structure.

Additionally, Applicant respectfully submits that Brambach does not teach or suggest an expanding agent that reacts during the molding step as claimed in claim 1. It is asserted that the claimed expansion agent is disclosed at column 3, lines 36-39 of Brambach. (See paragraph 5 of the Office Action dated December 24, 2008). Applicant respectfully disagrees. This passage cited by the Office teaches the in situ formation (generation) of a foamed core material within the sandwich structure. The “expandable material” recited in line 38 of column 3 of Brambach is merely the material that expands to form the foamed core. It is not an expandable material located in the sandwich structure that reacts in a mold. For instance, in the presently claimed invention, the expandable material in the sandwich structure reacts during molding. (See, e.g., page 8, lines 28-33 of the specification). The asserted “expandable material” in Brambach is expended prior to any possible molding of the sandwich material as the “expandable material” is needed to form the foam core of the sandwich structure. Accordingly, the “expandable material” of Brambach is not, and cannot be, the same as the expandable material recited in claim 1.

It is respectfully submitted that Lunde cannot make up for the deficiencies of Brambach, namely (1) molding at least one composite sandwich and (2) a composite sandwich that has incorporated therein an expansion agent that reacts during the molding step. Accordingly, Applicant respectfully submits that the combination of Brambach and Lunde would not result in the process claimed in claim 1. Thus, Applicant respectfully submits that independent claim 1, and all claims dependent therefrom, are non-anticipatory, non-obvious, and patentable.

Applicant also submits that there is no motivation for one of skill in the art to arrive at the process for manufacturing a molded part claimed in claim 1 based on the disclosures of Brambach and Lunde.² As discussed above, Brambach and Lunde, alone or in combination, neither teaches nor suggests (1) molding at least one composite sandwich and (2) an expansion agent in the composite sandwich that reacts during the molding step. Therefore, Applicant respectfully submits that Brambach and Lunde fail to teach all of the claim limitations set forth in claim 1. Accordingly, it is submitted that a *prima facie* case of obviousness has not been established for at least this reason.

Turning to the Office’s separate rejections of 10 and 11 under 35 U.S.C. §103(a) as being unpatentable over U.S. Patent No. 5,186,999 to Brambach (“Brambach”) in view of U.S. Patent No. 5,225,450 to Beukers (“Beukers”), Applicant respectfully submits that the Office has incorrectly

² To establish a *prima facie* case of obviousness, there must be some motivation, either within the reference or in the knowledge of those of skill in the art, to modify the reference or combine the references’ teachings, there must be a reasonable expectation of success, and the prior art references must meet all of the claim limitations.

interpreted the cited references and has therefore failed to establish a proper *prima facie* case of obviousness.


Applicant respectfully directs the Office's attention to claim 1 and to the arguments presented above with respect to the rejection of claims 9 and 12 under 35 U.S.C. §103(a) over Brambach and Lunde and submits that claim 1 defines a process for manufacturing a molded part that is not taught or suggested by Brambach (and Lunde). As discussed in detail above, Brambach does not teach or suggest (1) molding at least one composite sandwich and (2) a composite sandwich that has incorporated therein an expansion agent that reacts during the molding step as required by claim 1.

Applicant respectfully submits that the teachings of Beukers do not add to the Office's rejection so as to make claim 1 unpatentable. Even with the addition of the teachings of Beukers, Brambach still does not teach or suggest a process for manufacturing a molded part that includes molding at least one composite sandwich where the sandwich has incorporated therein an expansion agent that reacts during the molding step. It is respectfully submitted that Beukers adds nothing to the teachings of Brambach with respect to molding at least one composite sandwich or a composite sandwich that has incorporated therein an expansion agent that reacts during the molding step. As such, it is respectfully submitted that the combination of Brambach and Beukers does not teach or suggest the process for manufacturing a molded part recited in claim 1. Because claims 10 and 11 are dependent upon claim 1, which, as discussed in detail above, is not taught or suggested by Brambach and Beukers, Applicant submits that claims 10 and 11 are also not taught or suggested by Brambach and Beukers.

In summary, Applicant firmly believes that all pending claims are patentably distinguishable over the prior art and should be formally allowed. Upon careful review and consideration it is believed the panel will agree and instruct the Office to issue a Notice of Allowance. Any fees required in connection with this document may be debited to Deposit Account 50-0568.

Respectfully submitted,

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